

N O T I C E

THIS DOCUMENT HAS BEEN REPRODUCED FROM
MICROFICHE. ALTHOUGH IT IS RECOGNIZED THAT
CERTAIN PORTIONS ARE ILLEGIBLE, IT IS BEING RELEASED
IN THE INTEREST OF MAKING AVAILABLE AS MUCH
INFORMATION AS POSSIBLE



National Aeronautics and
Space Administration

E81-10198
CR-161000

Lyndon B. Johnson Space Center
Houston, Texas 77058

JSC-17015

DEC 19 1980

"Made available under NASA sponsorship
in the interest of early and wide dis-
semination of Earth Resources Survey
Program information and without liability
for any use made thereof."

1. R.G. Brown ES3

2. COMPUTER PROGRAM DOCUMENTATION

USER INFORMATION FOR THE RSO - TAPE PRINT

PROGRAM (RSOPRNT)

Job Order 52-379

CPD-936

NASACR-161000

N81-29509

Unclas
00198

G3/43

Prepared By

A. Lockheed Engineering and Management Services Co. Inc.

Houston Division

Houston, Texas

5. Contract NAS 9-15800

For

STRUCTURES AND MECHANICS DIVISION

THERMAL TECHNOLOGY BRANCH

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

LYNDON B. JOHNSON SPACE CENTER

HOUSTON, TEXAS

6. NOVEMBER 1980

7. LEMSCO-15903

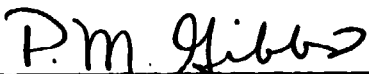
JSC-17015

(E81-10198) COMPUTER PROGRAM DOCUMENTATION
USER INFORMATION FOR THE RSO-TAPE PRINT
PROGRAM (RSOPRNT) (Lockheed Engineering and
Management) 11 P HC A02/MF A01 CSCL 09B

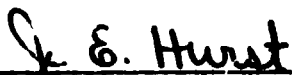
COMPUTER PROGRAM DOCUMENTATION
USER INFORMATION FOR THE RSO-TAPE PRINT
PROGRAM (RSOPRNT)

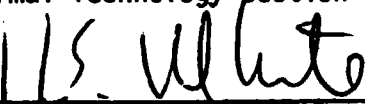
Job Order 52-379
CPD-936

Prepared By


P. M. Gibbs

Approved By


J. E. Hurst, Acting Supervisor
Thermal Technology Section


M. E. White, Manager
Engineering Analysis

Prepared By

Lockheed Engineering and Management Services Company, Inc.

For

STRUCTURES AND MECHANICS DIVISION

THERMAL TECHNOLOGY BRANCH

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
LYNDON B. JOHNSON SPACE CENTER
HOUSTON, TEXAS

NOVEMBER 1980

LEMSCO-15903

1. Report No. JSC - 17015		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle USER INFORMATION FOR THE RSO - TAPE PRINT PROGRAM (RSOPRNT)				5. Report Date November 1980	
				6. Performing Organization Code 625-51	
7. Author(s) P. M. Gibbs				8. Performing Organization Report No. LEMSCO -	
9. Performing Organization Name and Address Lockheed Engineering and Management Services Co., Inc. 1830 Nasa Road 1 Houston, Texas 77058				10. Work Unit No. 63-2455-2379	
				11. Contract or Grant No. NAS 9 - 15800	
12. Sponsoring Agency Name and Address National Aeronautics and Space Administration Lyndon B. Johnson Space Center Houston, Texas 77058				13. Type of Report and Period Covered COMPUTER PROGRAM DOCUMENT	
				14. Sponsoring Agency Code ES3	
15. Supplementary Notes					
16. Abstract <p>This document provides a user's guide for the RSOPRNT, a TRASYS Master Restart Output Tape (RSO) reader. Background information and sample runstreams, as well as, references, input requirements and options, are included.</p> <p style="text-align: center;">PRECEDING PAGE BLANK NOT FILMED</p>					
17. Key Words (Suggested by Author(s)) TRASYS MASTER RESTART TAPE ORIGINAL RUNSTREAM MITRE RUNSTREAM PSEUDO - FILE			18. Distribution Statement PRE-PROCESSOR PROCESSOR		
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages 12	
				22. Price*	

*For sale by the National Technical Information Service, Springfield, Virginia 22161

TABLE CONTENTS

Section	Page
1. INTRODUCTION	1
2. DISCUSSION	2
3. INPUT.	3
7. REFERENCES	6

FIGURES

Figure		Page
1.	Example Runstreams	4-5

1. INTRODUCTION

The RSO - Tape Print Program (RSOPRNT) is a thirteen routine program designed to read a TRASYS Master Restart Tape, and write the most commonly used types of data. This publication offers instruction for RSOPRNT's implementation. User type knowledge of the TRASYS program is assumed. For additional background information on TRASYS usage consult the references 1 and 2.

2. DISCUSSION

During TRASYS II processor execution, each restartable processor segment writes, to a tape or file, a pseudo-file containing the data necessary to restart an interrupted job with minimal repeated calculations. RSOPRNT reads the data and outputs the pseudo-file(s) specified by the user.

The two types of runstreams under which TRASYS II can be run, Original and Mitre, create two types of Master Restart Tapes, Original and Mitre. The Original Restart Tape has two files. The first file contains pre-processor information and the second file contains processor information. The Mitre Restart Tape has nine files, the first eight with pre-processor data and the ninth with processor data. RSOPRNT outputs only the processor data.

3. INPUT

Tape or Mass Storage file must be assigned to unit 1.

Tape: @ASG, T 1., device, tape number
M.S. file: @ASG, option (A, T or c) file name.
@USE 1., file name.

3.1 DATA DECK

This deck contains only integer information. Example runstreams are shown in Figure 1. The input can be in any column.

CARD

- 1 The first card must contain an integer, 2 or 9, indicating the number of files on tape.
2 for Original Runstream generation of tape
9 for Mitre Runstream generation of tape
- 2 The second card must contain an integer constant, say N, such that $1 \leq N \leq 7$, indicating the number of pseudo-files to be written.
- 3 The third card must have N integer values, in ascending order, separated by commas and/or blanks. These N values indicate the desired pseudo-file(s) corresponding number

1	- Correspondence	Data
2	- Properties	Data
3*	- Form-Factors	Data
4*	- Gray Bodies	Data (Solar)
5*	- Gray Bodies	Data (Infrared)
6	- Direct Incident Flux	Data (DICAL)
7	- Absorbed Heating Rate	Data (AQCAL)
8	- All of the above	Data
*	- Data values listed have been multiplied by nodal area.	

Figure 1. Example Runstreams

1. Deck set up for Mitre Tape

	VRUN	
	VQUAL ES3-L40006	
	VASG,A *TRASIN.	
	VASG,T 1.,8C,X12345	(Seven track tape)
	VXQT *TRASIN.RSOPRNT	
DATA DECK	{ 9	nine files
	{ 1	one option
	{ 8	all pseudo-files
	VPMD,ELP	
	VFIN	

2. Deck set up for Original Tape

	VRUN	
	VQUAL ES3-L40006	
	VASG,A *TRASIN.	
	VASG,T 1.,8C,X20282	
	VXQT *TRASIN.RSOPRNT	
	2	two files
	2	two options
	1,2	correspondence, properties
	VPMD,ELP	
	VFIN	

3. Deck set up for Mass Storage File

	VRUN	
	VASG,T 1.,8C,X01610	
	VASG,T FILE.	
	VCOPY,G 1.,FILE.	
	VFREE 1.	
	VUSE 1., FILE.	
	VQUAL ES3-L40006	
	VASG,A *TRASIN.	
	VXQT *TRASIN.RSOPRNT	
	2	two files
	3	three options
	2,4,6	properties, gray bodies, DICAL
	VPMD,ELP	
	VFIN	

4. Output

The logical record number, date and time of TRASYS run are printed in the heading of each pseudo-file. Node identification numbers are printed above corresponding data.

5. Program Termination and Error Procedure

Negative or real values in Data Deck cause fatal errors. If an error occurs while reading the tape, the present record is skipped and reading resumes. Normal program termination occurs when an end of file marker is encountered.

6. Conclusion

This program has been successfully tested. RSOPRNT gives TRASYS users data generated by TRASYS without having to make another costly TRASYS run.

7. REFERENCES

- 1. Thermal Radiation Analysis System User's Manual, Martin Marietta, June 1979.**
- 2. Thermal Radiation Analysis System Programmers Manual, Martin Marietta, June 1979.**